

Assignment Solution

Chapters 1, 2 & 3

Chapter 1 – Introduction to Computer

Part 1: Choose The Correct Answer:



8. Second generation computers replaced the vacuum tubes with transistors, which increased Computer

- A. Speed**
- B. Capacity
- C. Storage
- D. Size

Part 2: Essay Questions

9. Discuss two of the most common Binary Coding Schemes

- **EBCDIC:** uses 8 bits (1 byte) for each character.
- **ASCII:** Depending on the version, ASCII uses 7 or 8 bits (1 byte) for each character. Extended ASCII math symbols and Greek letters. ASCII versions are not enough to handle such languages as Chinese and Japanese.
- **Unicode:** uses 2 bytes (16 bits) for each character. It allows almost all the written languages of the world to be represented using a single character set.



Chapter 2 - Hardware

Part 1: Choose The Correct Answer:

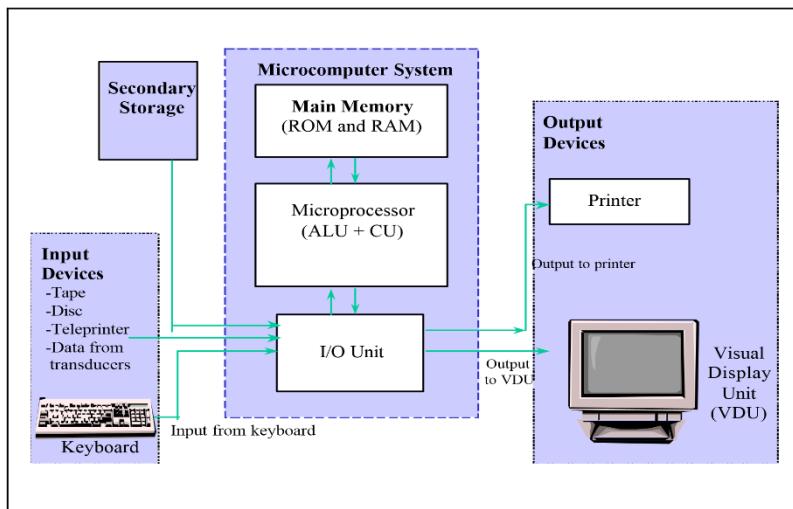
1. A user should place a new sound card in the system unit in the A. hard drive
 B. CD drive
C. expansion slot D. memory chip
2. Which of the following is NOT a place to store data ?
 A. zip disk B. secondary storage
 C. DVD **D. motherboard**
3. Displays that use organic compounds that produce light when exposed to an electric current.
 A. LED B. LCD
C. OLED D. CRT
4. The _____ contains the central electronic components of the computer.
A. Motherboard B. System unit
 C. Peripheral unit D. Input unit
5. _____ printers have tiny hammer-like keys that strike the paper through an inked ribbon.
 A. Inkjet **B. Impact**
 C. Nonimpact D. Laser
6. _____ ports are now the most common ports for connecting input and output devices to the computer.
A. Universal serial bus (USB) B. Serial
 C. Parallel D. FireWire
7. The percentage of time your CPU is working is referred to as CPU. _____
 A. throughput B. capacity
 C. latency **D. usage**
8. Measures of microcomputer primary storage capacity today are expressed in
 A. Megabytes **B. Gigabyte's**
 C. Terabytes D. bytes



Part 2: Essay Questions

9. Draw an illustrative figure for the main Structural Component of a Computer System

Answer:



10. Discuss the main components of CPU according to its function with illustrating figure for the machine Cycle

Answer:

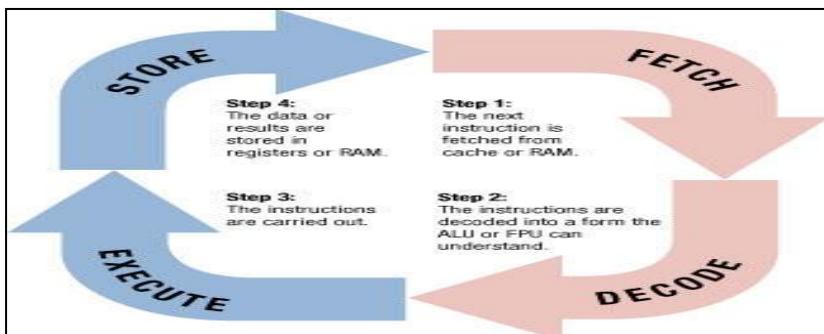
The Control Unit: CU fetches data and instructions from the RAM, decodes the instruction, executes the instruction, and stores the result.

Arithmetic Logic Unit (ALU): performs arithmetic operations (addition, subtraction, ..) and logical operations (comparisons) and controls the speed of those operations.

Registers: Registers are special high-speed storage areas that temporarily store data or program instruction during processing. For example, if two numbers are to be multiplied, both numbers must be in registers, and the result is also placed in a register.

Buses—Data Roadways: Buses, or bus lines, are electrical data roadways through which bits are transmitted within the CPU and between the CPU and other components of the motherboard. Bus width and bus speed affect the overall processing speed of the computer.

Machine Cycle:



Chapter 3 - Software

Part 1: Choose The Correct Answer:

1. The _____ is responsible for managing the processor and all other components of the computer system, and is an essential part of the operating system.
A. BIOS B. CMOS
C. processor **D. kernel**
2. The basic input/output system is stored on a _____ chip.
A. ROM B. CPU
C. RAM D. CMOS
3. Which of the following is NOT a step in the boot process?
A. The BIOS is activated by powering on the CPU.
B. Configuration and customization settings are checked.
6. In a spreadsheet, the columns and rows form individual boxes called _____.
A. cells B. intersects
C. addresses D. worksheets
7. Computer-aided design software is used primarily by _____.
A. engineers to create models
B. airline pilots to navigate
C. project managers to track tasks
D. game makers to create games.
8. Which of the following is software that you can use for an unlimited time at no charge?
A. freeware B. alpha version software
C. Internet-based software D. Shareware

Part 2: Essay Questions

9. **Discuss the advantage and disadvantage of Contract Software and Off-The-Shelf Software**

Answer:

Contract Software:

Advantages:

1. Software more closely matches needs



2. Development results are more controllable
3. More flexibility in making changes

Disadvantages:

1. Development is generally longer
2. It may be difficult for in-house system development staff to provide the required level of ongoing support and maintenance
3. Greater risk of performance problems

Off-The-Shelf Software:

Advantages:

1. Lower costs
2. Lower risks
3. Higher quality

Disadvantages:

1. Organization may be paying for features it doesn't require
2. Software may lack important features
3. Work processes may need to be changed to match software

10. Define the following terms with illustrating the difference between them.

Answer:

Multiprocessing: Multi process operating systems can work on several processes at once by breaking the tasks into threads.

Multitasking: The capability of an operating system to handle more than one task at a time.

Multi user: The ability for multiple users to access resources at the same time. The OS switches back and forth between users

Multiprocessor: Occurs when a computer system with two or more processors can run more than one program, or thread, at a given time by assigning them to different processors.

Multithreading: The capability of an operating system to handle (execute) multiple threads of multiple programs at a time. Multi-threading may focus on running multiple tasks within a single application simultaneously. For example, a word processor application may edit one document while another document is being spell-checked.

